

REMARKS

Reconsideration of the present application is respectfully requested. Claims 1-56 were originally presented. Claims 37-56 have been withdrawn as being drawn to a non-elected invention and claims 57-64 have been added, so that claims 1-36 and 57-64 are presently pending. Claims 1 and 16 are independent.

In the Office Action mailed April 27, 2006, the Examiner rejected independent claims 1 and 16 under U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,254,766 to Sughrue (hereinafter Sughrue). Applicants respectfully submit that independent claims 1 and 16 are not obvious over the cited references of record because the Examiner has not cited a prior art reference that teaches or suggests all the claimed features; there is no motivation to modify Sughrue in the manner suggested by the Examiner to arrive at the invention as recited in independent claims 1 and 16; and one skilled in the art would not have a reasonable expectation of success in the Examiner's proposed modification of Sughrue, as discussed more fully below. Therefore, Applicants submit that no *prima facie* case of obviousness has been established.

To establish a *prima facie* case of obviousness based on a single prior art reference, the examiner must demonstrate that (1) the reference teaches or suggests all the claim limitations, (2) the reference, coupled with the knowledge generally available in the art at the time of the invention, contains some suggestion or motivation to modify the teachings of the reference, and (3) the proposed modification would have had a reasonable expectation of success, determined from the vantage point of a skilled artisan at the time the invention was made. (MPEP § 2142).

Independent claim 1 recites “admixing: 1) a liquid, 2) a zinc-containing compound, 3) a silica-containing material, 4) alumina, and 5) a promoter so as to form a mixture thereof” as the first step in a method to produce a composition. Similarly, independent claim 16 recites “admixing: 1) a liquid, 2) a metal-containing compound, 3) a silica-containing material, 4) alumina, and 5) a first promoter so as to form a mixture thereof” as the initial step in a method to produce a composition. The Examiner recognizes that Sughrue does not disclose the step of admixing a promoter in the initial step of creating a composition. However, the Examiner states that it would have been obvious “to one of ordinary skill in the art at the time the invention was

made to have added such promoter to the mixture in the admixing step (a) of Sughrue in order to achieve a promoted and effective catalyst composition, and in view of step (e) of the reference which teaches to impregnate the resulting calcined particulate with nickel.” (Office Action, p. 3, lines 12-16).

Applicants first submit that the Examiner has not cited a reference that teaches or suggests the recited claim feature of “admixing: . . . 5) a promoter.” As previously noted, the Examiner recognizes such but argues that it would have been obvious to one with ordinary skill in the art to modify Sughrue to include this feature. Applicants respectfully submit that it is improper to rely solely on the knowledge of one with ordinary skill in the art to teach a claimed feature. Section 2142 of the MPEP requires that the prior art references must teach or suggest all the claimed features. Because the Examiner has not cited a reference that discloses the above-discussed claimed feature, removal of the rejection is requested for failure to establish a *prima facie* case of obviousness.

Applicants further submit that the Examiner has not established a proper suggestion or motivation to modify Sughrue as suggested. MPEP § 2143.01 states that there are three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. The Examiner argues that it would have been obvious to modify Sughrue “in order to achieve a promoted and effective catalyst composition.” (Office Action, page 3, lines 14-15). The Examiner is improperly relying on Applicants’ disclosure and presentation of the problem solved as a basis for the suggestion or motivation to combine. (MPEP § 2143).

Additionally, the Examiner has not cited any prior art reference that suggests the modification. Sughrue certainly does not suggest modifying its own disclosure to arrive at the claimed invention. Nowhere is it found in Sughrue any suggestion whatsoever that the promoter should be admixed in the initial step of preparing the composition. Sughrue only discloses impregnating a resulting particulate after the particulate has been dried and calcined. In catalyst preparation, admixing and impregnation are two very different procedures, and one having ordinary skill in the art would readily recognize that Sughrue does not suggest admixing a

promoter in the initial step of the composition preparation as recited in independent claims 1 and 16. Thus, the teachings of Sughrue do not provide the requisite motivation to modify Sughrue.

Finally, although motivation to modify a reference can come from the knowledge of one having ordinary skill in the art, one would not be motivated to modify Sughrue in the manner suggested by the Examiner. In particular, the art teaches away from the claimed feature because the art teaches that admixing the active component of a catalyst within a support is ineffective compared to impregnating a support. Impregnation involves depositing an active component on the *surface* of a support. Thus, those with ordinary skill in the art understand that impregnating techniques facilitate higher dispersion of the active component, which allows better contact with reactants. Conversely, it is well known in the art that admixing the active component of a catalyst with a support *decreases* dispersion, which in turn would ordinarily decrease the effectiveness of a catalyst. Additionally, those having ordinary skill in the art would recognize that the hardness of a typical catalyst would be weakened by admixing the active component in a support. Therefore, the knowledge of those having ordinary skill in the art cannot be a source of motivation for modifying Sughrue in the manner suggested by the Examiner to arrive at the invention as recited in independent claims 1 and 16.

Accordingly, none of the three possible sources for a motivation to modify Sughrue has been properly established. Thus, there is no motivation to modify Sughrue in the manner suggested by the Examiner to arrive at the invention as recited in independent claims 1 and 16.

In addition to there being no motivation to modify Sughrue in the manner suggested by the Examiner, there is also no reasonable expectation of success. MPEP § 2143 states that, in order to establish a *prima facie* case of obviousness, there must be a reasonable expectation of success. As stated above, it is well known in the art that mixing the active component of a catalyst in with the support decreases dispersion and hardness of the catalyst. Thus, one having ordinary skill in the art would not reasonably expect to succeed using a method of mixing the active component in the support as opposed to an impregnation technique.

Furthermore, according to MPEP 2145(X)(D)(3), “proceeding contrary to accepted wisdom in the art is evidence of nonobviousness.” As mentioned above, the accepted wisdom in

the art is that mixing of an active component within a support will render a catalyst insufficiently dispersed as well as unacceptably soft. As Applicants have proceeded contrary to this “accepted wisdom” by admixing a promoter in the initial step of catalyst preparation, this is evidence of nonobviousness.

Accordingly, because the cited references of record do not teach or suggest all the claimed features, there is no motivation, suggestion, or reasonable expectation of success to modify Sughrue in the manner suggested by the Examiner, and Applicants have proceeded contrary to accepted wisdom, Applicants submit that no *prima facie* case of obviousness has been established with respect to independent claims 1 and 16. Therefore, Applicants respectfully request these rejections be withdrawn.

Claims 57-64 have been added to further define the invention.

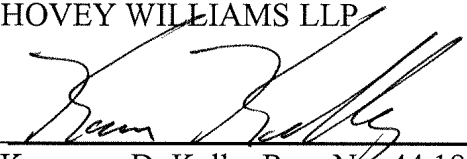
In view of the foregoing, Applicants respectfully submit that independent claims 1 and 16 are in condition for allowance. Additionally, while dependent claims 2-15, 57, 58, 61, and 62, which depend from independent claim 1, and claims 17-36, 59, 60, 63, and 64, which depend from independent claim 16, recite additional patentable features, these claims should also be in condition for allowance because they depend from patentable independent claims. Therefore, the present application should now be in condition for allowance and such allowance is respectfully requested. Should the Examiner have any questions, please contact the undersigned at (800) 445-3460.

Please deduct from Deposit Account No. 19-0522 the amount of \$400.00 for the 8 additional claims, all of which are dependent. The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 19-0522.

Respectfully submitted,

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